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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/925,613 | 08/09/2001 | Attila Szepesvary | 021756-070700US | 2976 |

51206 7590 06/09/2009
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| EXAMINER |
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RUTTEN, JAMES D

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| ART UNIT | PAPER NUMBER |
|----------|--------------|

2192

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| MAIL DATE | DELIVERY MODE |
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06/09/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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|------------------------------|--------------------------------------|------------------------------------------|--|
| Office Action Summary | Application No. 09/925,613 | Applicant(s) SZEPESVARY ET AL. | |
| | Examiner JAMES RUTTEN | Art Unit 2192 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5,8-13,16-19,21 and 23-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5,8-13,16-19,21 and 23-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to Applicant's submission filed 3/31/09, responding to the 12/31/08 Office action which detailed the rejection of claims 1-3, 5, 8-13, 16-19, 21, and 23-27. Claims 1 and 19 have been amended, and claims 26-27 have been canceled. Claims 1-3, 5, 8-13, 16-19, 21, and 23-25 remain pending in the application and have been fully considered by the examiner.

Response to Arguments/Amendments

2. The amendment to claim 19, filed 3/31/09, has overcome the prior claim objection, which is likewise withdrawn.

3. Applicant's arguments filed 3/31/09 have been fully considered but they are not persuasive. On page 7, Applicants essentially argue that the prior art of record, in particular U.S. Patent 5,933,140 to Strahorn et al., does not teach or suggest "outputting, to a context-based help utility, information about the at least one graphical element identified by parsing the tokens in the web-based application" as required by claim 1. However, a combination of prior art of record U.S. Patent 6,717,593 to Jennings, and Strahorn appears to teach the limitation. Jennings discloses outputting information corresponding to the identified graphical elements. See column 7 lines 32-34. Also, Strahorn teaches a server which outputs information about graphical elements to a context-based help utility. See Strahorn column 4 lines 38-42:

When the user selects a section of depiction 320, for example, using a mouse, **program 312 retrieves help information** from server 102 specific to the section selected, and if new help information is available, program 312 updates help information section 324.

Thus, Jennings and Strahorn appear to teach the limitations, and Applicants' argument is not persuasive. The remaining arguments on page 8 are dependent upon the argument for claim 1, and are not persuasive for the same reasons.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-3, 5, 8-13, 16-19, 21, and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,717,593 to Jennings (hereinafter "Jennings"), in view of U.S. Patent Application Publication US 20020104068 A1 by Barrett et al. ("Barrett") in view of "Compilers: Principles, Techniques, and Tools" by Aho et al. (hereinafter "Aho") in view of U.S. Patent 5,933,140 to Strahorn et al. (hereinafter "Strahorn").

In regard to claim 1, Jennings teaches that the interactor parses the description documents of an interface into elements and reflects them in the object model to form an instance representing the interface, downloads the objects corresponding to the reflected elements, registers their interfaces in the object model instance to make them accessible by the elements, and invokes execution of each downloaded object with the corresponding element to render the element. (E.g. see Abstract and associated text).

Jennings further discloses the standard use of XML as including utilization, by web programmers, of a Document Object Model (DOM) to "create and build XML documents, navigate their structure, and add, modify, or delete elements and content" (see column 5 lines 30-50). Jennings discloses defining a user interface in terms of an object model using XML (see column 5 lines 52-55). Jennings discloses a method for identifying user interface (UI) objects in a markup-language stream, the method comprising the steps of:

receiving, from a server and at a computer system, a web-based application for display in a web browser, the web-based application comprising one or more web pages;

See Fig. 2, and column 4 lines 35-47 and 60-61:

FIG. 2 shows a communications system that implements a second illustrative example of the invention. The system comprises one or more **servers** 210 and one or more **clients** 200 interconnected by a communications network 208. Network 208 is illustratively the Internet or the **World Wide Web**, and communications between clients 200 and server 210 are effected via hypertext transfer protocol (HTTP) transfers 206 through network 208. Clients 200 are stored-program-controlled machines, such as personal computers, workstations, personal digital assistants, or intelligent telephones, each comprising a processor 202 and a memory 201 storing data for use and programs for execution by processor 202. These programs may include a **Web browser**.

...

Users access **applications** 120 via clients 200.
[emphasis added]

Also see column 7 lines 15-20, e.g. "The received document, expressed in **hypertext mark-up language (HTML) with JavaScript inserts**, is parsed by an HTML parser and a JavaScript parser into HTML and JavaScript elements" [emphasis added]. The html document is regarded as at least one "web page."

receiving a predefined grammar for the web-based application; See column 8 lines 53-58 for a discussion of an XML parser which parses a document into XML elements. Note that a predefined grammar is inherent in such parsing, otherwise the

parser would not know be able to recognize an XML element. Jennings also implies grammars for particular applications. See column 2 lines 53-57.

...a parser computer program based on the predefined grammar... E.g. see FIG. 7 step 401 and associated text, e.g. col. 7:35-65.

Jennings des not expressly disclose *automatically generating* a parser computer program based on the predefined grammar *using an automated parser generator tool*.

However, in an analogous environment, Aho teaches the well known method of using a parser generator tool to automatically generate a parser based on a predefined grammar. See Section 4.9, especially Fig. 4.55:

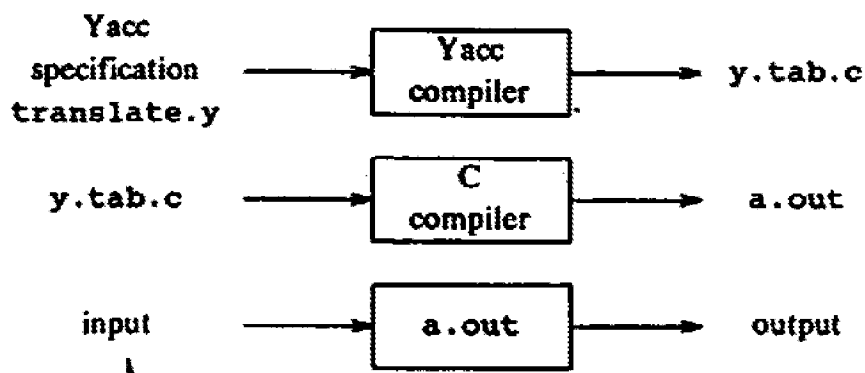


Fig. 4.55. Creating an input/output translator with Yacc.

Note that the grammar is represented as the “Yacc specification” and the parser is represented as “a.out”. It is also noted that Applicant’s originally filed specification also describes this “well known parser generator” in paragraph 2 on page 10. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Aho’s teaching of a parser generator with Jennings parser. One of ordinary skill would have been motivated to use a well known tool to facilitate the construction of a parser in

order to determine if source code is syntactically well formed (See Aho page 159, bullet two, and the 1st paragraph in section 4.9 on page 257).

Jennings further discloses:

scanning a document object model (DOM) of the web-based application with the parser computer program...; E.g. see FIG. 16 and associated text, e.g. see col. 7:35-52.

Jennings does not expressly disclose: *scanning the DOM to generate tokens*. However, Barrett discloses generating tokens using a DOM. See at least paragraph [0101]: "After tokenization, the following token stream will have been generated from the DOM model of FIG. 10..." It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Jennings's application with Barrett's token generation in order to provide a basis for further development of the application as suggested by Barrett (see paragraph [0097]).

parsing <the tokens> with the parser computer program to identify at least one graphical element in the web-based application e.g. see col. 7 lines 20-25 and 42-44, also see col. 7 lines 29-32:

The **parsers** transform the hierarchy of HTML tags in the source document into a form that the underlying layout engine requires (the target form). The browser reflects the information into an object hierarchy called the document object model (DOM) to create instances of DOM class objects that correspond to the elements. The DOM may comprise globally available objects as well as user-defined objects (e.g., plug-ins). A portion of an illustrative browser's DOM showing objects and their hierarchies is shown in FIG. 15. Instantiated **objects are given to a layout manager, which uses them to implement what is displayed on the screen**, including input elements like buttons, radio buttons, and text entry. [emphasis added]

Note in order to display graphical elements, they must be parsed and identified, otherwise a button would be indistinguishable from text entry or other graphical elements.

and outputting one or more UI objects that correspond to the at least one graphical element in the web-based application. See column 7 lines 32-34:

Instantiated objects are given to a layout manager, which uses them to implement what is displayed on the screen, including input elements like buttons, radio buttons, and text entry.

outputting ... information about the at least one graphical element identified by parsing the tokens in the web-based application; and See column 7 lines 32-34:

Instantiated objects are given to a layout manager, which uses them to implement what is displayed on the screen, including input elements like buttons, radio buttons, and text entry.

Jennings, Barret, and Aho do not expressly disclose: *to a context-based help utility. Further, Jennings, Barret, and Aho do not expressly disclose: providing context based help based at least in part on the at least one graphical element in the web-based application. However, Strahorn teaches context-based help based upon a particular portion of the application. See Fig. 3 and column 3 lines 12-14:*

The user may select portions of the miniaturized depiction, causing the help software to display help information specific to the selected portion.

Also see column 4 lines 38-42:

When the user selects a section of depiction 320, for example, using a mouse, **program 312 retrieves help information** from server 102 specific to the section selected, and if new help information is available, program 312 updates help information section 324.

In order for Strahorn's program 312 to retrieve help information, it must be output from the server. In other words, information about the graphical element is output to the context-based help utility based on the graphical elements in the web page. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Strahorn's context based help with Jennings' parsing of graphical elements in order to

overcome the limitations of conventional help facilities in a web page as suggested by Strahorn (see column 1 lines 50-53).

As per claim 2, the rejection of claim 1 is incorporated and further Jennings teaches: “*wherein said markup-language stream drives a markup-language-based browser application, and wherein the scanning step includes scanning the DOM generated by a browser that displays that application.*” (E.g. see col. 7:35-52).

As per claim 3, the rejection of claim 1 is incorporated and further Jennings teaches: “*wherein the scanning step includes identifying elements of the DOM by traversal thereof.*” (E.g. see FIG. 16 and associated text, e.g. see col. 7:53-57).

As per claim 5, the rejection of claim 3 is incorporated and further Jennings teaches: “*wherein the scanning step includes generating one or more tokens for each scanned DOM element.*” (E.g. see col. 7: 7:42-45).

As per claim 8, the rejection of claim 1 is incorporated. Jennings further teaches: “*wherein the at least one UI objects comprises one of a user input field (E.g. see col. 7:31-32, text entry and see FIG. 15, block “Password” and associated text), a text field (E.g. see col. 7:31-32, text entry and see FIG. 15, block “Text” and associated text), a metatag (E.g. see FIG. 4 and associated text, e.g. see col. 5:47-50, and col. 7:45-50),*

unprintable markup-language (E.g. see FIG. 15, block “Hidden” and associated text), *or an in-line image* (E.g. col. 7:35-40 and see FIG. 15, block “Image” and associated text).”

As per claim 9, the rejection of claim 1 is incorporated and further Jennings teaches: “*wherein the scanning and parsing steps are adapted to identify UI objects that correspond to elements displayed in the web-based application.*” (E.g. see FIG. 16 and associated text, e.g. see col. 7:35-52).

As per claim 10, the rejection of claim 1 is incorporated and further Jennings teaches: “*grouping the tokens into syntactic structures that identify items displayed by the web-based application.*” (E.g. see col. 7:20-25).

As per claim 11, the rejection of claim 10 is incorporated and further Jennings teaches: “*wherein said step of grouping comprises identifying similarly formatted markup-language elements based on their markup-language attributes such as classname, font size, style, tag color, and size.*” (E.g. see col. 5:17-29, style sheet).

As per claim 12, the rejection of claim 1 is incorporated and further Jennings teaches: “*wherein said at least one object comprises a name* (E.g. see col. 6:1-3), *content* (E.g. see col. 6:1-3, value), *a shape* (E.g. see col. 5:64), *or a location* (E.g. see col. 6:3-5).”

In regard to claim 13, the above rejection of claim 1 is incorporated. All further limitations have been addressed in the above rejection of claim 1.

In regard to claim 16, the above rejection of claim 1 is incorporated. Jennings does not expressly disclose a LALR(1) parser. However, Aho teaches that Yacc is a LALR parser. See paragraph 1 in section 4.9 on page 257.

In regard to claim 17, the above rejection of claim 1 is incorporated. Jennings does not expressly disclose a LR(1) parser. However, Aho teaches that Yacc is a LR parser. See paragraph 1 on page 216.

As per claim 18, the rejection of claim 1 is incorporated and further Jennings teaches: “*wherein the markup language is any of HTML,*” (E.g. see col. 7:16-20).

As per Claim 19, Jennings discloses a digital data processing system. See Figure 2. All further limitations have been addressed in the above rejection of claim 1.

As per claim 21, the rejection of claim 20 is incorporated and is rejected for the same reason set forth in connection with the rejection of claim 12.

As per claim 23, the rejection of claim 19 is incorporated and further Jennings teaches: “*wherein said tokens are interpreted according to the predefined grammar to*

identify and distinguish among UI objects of the web-based application's display.” (E.g. see FIG. 16 and associated text, e.g. see col. 7:35-65).

As per claim 24, the rejection of claim 19 is incorporated and is rejected for the same reason set forth in connection with the rejection of claim 8.

As per claim 25, the rejection of claim 19 is incorporated and is rejected for the same reason set forth in connection with the rejection of claim 18.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES RUTTEN whose telephone number is (571)272-3703. The examiner can normally be reached on M-F 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on (571)272-3695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. Derek Rutten/
Examiner, Art Unit 2192